

HABITAT CONSERVATION PLAN
Technical Advisory Committee
July 18, 2006. 9am – 12pm
Arizona Game and Fish Department Conference Room
555 North Greasewood Road
Tucson, Arizona 85745-3612

MEETING SUMMARY

Attendees: Guy McPherson, Trevor Hare, Ann Phillips, Rich Glinski, Linwood Smith, Dennis Abbate, Ralph Marra (Tucson Water Department), Lori Anderson (Coalition for Sonoran Desert Protection), Marit Alanen and Mima Falk (USFWS), Sonya Kazaros (Arizona State Land Department), Jennifer Becker (Pima County Flood Control District), Michael Wyneken (City of Tucson – Planning), Leslie Liberti (City of Tucson – City Manager’s Office), Camille Ensle and Geoff Soroka (SWCA)

1) Update on Upcoming TAC Meetings

a. Scheduled TAC Meetings:

- **August 1, 9:00 – 11:00 AM @ AGFD.**
- **August 15, 9:00 – 11:00 AM @ AGFD.**
- **First and Third Tuesdays, 9:00 – 11:00 AM @ AGFD.**

2) Old Business

a. Meeting Minutes – June 6, and June 20, 2006

Leslie asked if there were any comments on the meeting minutes for the two meetings in June. The TAC approved the meeting minutes.

3) Surveys: update on Segment 1 survey and discussion of needed surveys for Segment 2 and beyond.

Leslie noted that at the last meeting, the TAC continued discussions regarding which surveys are needed for next year and which of the potential conservation target species should remain on the list. Leslie handed out a table to the TAC containing survey needs for Segment 2 and beyond, and noted that today the TAC will continue the discussion regarding which surveys should be funded and who should conduct the surveys. Leslie mentioned that they could not use AGFD for the burrowing owl bioaccumulation work, because this survey was not included in the original research grant. Geoff has not yet contacted Courtney Conway about doing the burrowing owl surveys, so he will make sure to contact him soon. The TAC received the seed bank proposal from Travis. Leslie also asked him about seed trapping, and he wants to design a proposal that covers more than the 2,000 acres on which buffelgrass will be eradicated this year. However, Travis has not sent Leslie a proposal with the increased acreage yet. The TAC has decided to let the Cooperative Weed Management Group take the lead on the buffelgrass mapping. Geoff mentioned that Sam Drake could submit a proposal for doing a remote sensing

mapping effort for buffelgrass. The TAC talked about the pros and cons, and what information could be used, such as existing PAG aerial photos and expensive quick bird imagery. The group also discussed the extent to which buffelgrass density could change over 1–2 years. Leslie handed out a map showing buffelgrass locations in proximity to COT HCP planning areas. Geoff mentioned that some of the surveys on the map date back to 2000, so the locations could have changed, probably having expanded since these surveys were conducted. The TAC concluded that the map also does not illustrate density. Geoff suggested that Sam Drake's remote sensing efforts might be able to clarify the existing information. Trevor is still trying to confirm the tortoise situation in the expanded Southlands planning area with Cecil Schwalbe. Trevor noted that most tortoise experts in the region are concerned about the corridor from the Rincons to the Santa Ritas, along with small movement areas along Agua Verde and Cienega creeks. Leslie has not seen a proposal yet from Marc Baker for the cacti surveys, but he gave a ballpark figure of \$21,000 for the same number of transects as proposed earlier, now just for longer transects. The TAC concluded that the Nichol's turk head cactus sighting reported in HDMS was either erroneous or was a mis-identification of species, and that the habitat there does not support the species. Mima visited the site twice without ever seeing anything resembling the species.

4) Discussion: Proposed Expanded Planning Area

Leslie handed out a table listing potential new HCP target species. This table identifies the original target species, and those species that were absent in the original southlands planning area, but have the potential, or are likely, to occur within the expanded planning area. This table also lists the surveys that have been done and who did them, how the Pima County habitat model currently looks for these species, what the specific needs are for each species, and a list of the members of each species' subcommittee. Leslie wants the TAC to finalize the expanded species list, to decide the subcommittee members for each of the new species, and to decide how to expand the habitat models for the original species.

Leslie then handed out a map for the proposed expanded planning area based on the discussion at the last meeting. The Municipal Planning Area, which is now partially included in the HCP Planning Area, could be annexed sometime between now and when the city stops growing. This doesn't imply that the City is going to annex all of this land, but just that it might. The fringe of the city is where the most immediate annexations are going to occur. Leslie noted that the main focus for annexing is to the southeast. The TAC had discussed the piece of land between San Xavier District and Tucson Mountain Park, and there is neither an immediate nor long-term priority in that direction. Ralph explained that the piece of land in question includes areas to which the City is currently serving water, and the entire area may be completely served by the City in the future. So, the area may be readdressed in the future, but there isn't an immediate discussion of annexing the area. Guy noted that the growth and development is currently heavy in the western portion of the planning area, and that the U of A sold a section there to a developer, so development may severely change the western area. Rich discussed that the foothills region does not want to be annexed. In addition to the expanded HCP planning area, a couple of other planning areas are identified on the map. The bluish areas are joint planning areas that are subject to land use control by other entities. These areas include Davis-Monthan, the U of A Tech Park, and an area that Sahuarita has indicated that they would like to annex. The greenish areas are proposed ecological and cultural heritage areas are the regions within the planning area where there is little or no concern of endangered species impacts and

where there is already significant development. If there are areas that are already mostly developed, or no known listed species occur there, then an HCP is not the best mechanism to deal with conservation of these areas because of the difficulty in developing an HCP and due to the long-term obligations related to implementing an HCP. The city does not want to incur these difficulties in areas where there are no take issues. Developing these ecological and cultural heritage areas is another way of having the same goals as an HCP, but accomplishing this from a policy perspective. Leslie then noted the important watersheds that would be addressed as ecological and cultural heritage areas, starting with the Northeast. This includes the Agua Caliente and Tanque Verde watersheds, the Atterbury watershed in the Southeast, and the West Branch of the Santa Cruz watershed on the west side. One of the discussions regarding the planning area was to cut it off at the southern boundary at the Tanque Verde watershed, at the point where it comes up the east side of town. However, that is not necessarily what is needed, as somewhere in that area will be the transition zone between the ecological and cultural heritage areas, and the HCP area. Trevor commented about his concern with the area that Sahuarita is interested in annexing. However, he is glad to see that the Rincon Valley is included in the HCP planning area. The TAC is going to forward this map on to the Stakeholder Advisory Committee (SAC) and the mayor and council, because they want to approve it and formalize it as the official HCP planning area.

Leslie asked the TAC for feedback on the new species that were included on the table that was handed out earlier. The TAC went through each of the species and decided whether to include each species on the conservation targets list (the list), and to also decide if any more information is needed in the next few months. For cactus ferruginous pygmy owl, Dennis explained that nine pairs of birds were unexpectedly located in the Altar Valley area, however, that activity won't have much bearing on the areas on the map. Without radio-tracking, there is no way of knowing how far CFPO travel, or if they travel into the expanded planning area. Radio-tracking is very expensive, and likely wouldn't give the TAC any useful information anyways. Leslie asked if suitable habitat for this species needed to be addressed for the expanded Southlands. Trevor replied that the Rincon Valley is in the Southlands portion of the planning area, and that it could be important to CFPO. For example, there was one record of an owl heard calling in Posta Quemada Canyon. Dennis said that the Forest Service had reported that call, however, it was not identified again in subsequent surveys. Dennis explained that there are two things to consider about the eastern area, there were a limited number of surveys done and potential habitat does exist there. There was one report of nesting activity in 1976 from Sabino Canyon, so there have been owls present in the general vicinity. Dennis asked the TAC to keep in mind that there might be more surveys needed specifically in the Rincon Valley portion, and probably in other areas of the Southlands. Scott Richardson probably has a list of the areas already covered, and the NPS does surveys quite regularly, but they have not reported seeing any. Leslie asked if there were any recommendations on the habitat model. Dennis replied that perhaps the subcommittee should have an e-mail discussion regarding this.

For western burrowing owl, Leslie explained that AGFD was out last year, and the beginning of this year, doing a habitat assessment and surveys in Avra Valley. AGFD found a considerable number of owls and are still working on the report. AGFD also has implemented a program looking at different sections of the region for the last three years, and there is survey data available. They tracked owls dispersed around Avra Valley and along the Santa Cruz River, all locations and information noted in the draft report. As far as habitat in the southlands, the TAC mapped only ridges as suitable habitat, because there was concern that there was too much

sheet flow in the lower areas to support burrows. The TAC included all of Avra Valley as habitat, along with the entire reach of the Santa Cruz. Cathy said that she will talk to Mike Ingraldi and AGFD can delineate suitable habitat in the expanded southlands if needed. The TAC confirmed that they would like the habitat in Avra Valley to be refined with the new survey information.

Leslie has not heard from Harold regarding the green-up of buffelgrass in Avra Valley. The draft EA for the "A" Mountain and Tumamoc spraying is available on the City website. Dennis asked what effect the monsoon rains will have on the areas that have been sprayed. Jennifer said that as long as there isn't rain within two hours, effects should be minimal. Leslie will check with Travis about the spraying. As of last Friday, Denise Baker had received two comments on the draft EA, one from the committee and one from the general public, so there might not be any deal-breakers. Travis has expressed concern about delaying the spraying efforts, so the City will still try to spray this year. Dennis asked how the City plans to conduct the spraying efforts each year. Leslie said that they would do one full coverage initially, and then "spot spray" after that. The City and Pima County Parks and Recreation will contract out to do the spraying, however, the RFP has not been finalized yet. Dennis asked what would be needed after 2 to 3 years, assuming we eradicate all of the buffelgrass. Dennis feels that more planning needs to be done regarding this. Leslie responded that we are doing bits and pieces. We are using city council for funding, and other pieces of the equation are falling into place, but as a region, how do we decide success? Geoff reminded the group that remote sensing could help with that, too. A baseline could be established this year for buffelgrass locations, and then imagery could be used in subsequent years to determine the presence or absence of the species across large areas.

For Pima pineapple cactus (PPC), Leslie discussed how Marc Baker had conducted survey transects in the Southlands last year with the extra US Fish and Wildlife Service (USFWS) money. Then he outlined "higher density habitat" for the City of Tucson, using arials, soils, and vegetation characteristics to identify areas thought to be more likely to have higher densities of the species and then confirming these with survey transects both inside and just outside of the "higher density" polygons. Leslie said that for the habitat model for this species, the TAC included the upland Sonoran Desert and semi-desert grassland areas, then removed the heritage riparian areas. Mima and Leslie checked some of the areas where they had questions. As a refinement, the City used the areas that Marc has identified as potential high-density areas. Leslie asked if using that and expanding to the east and south is a reasonable approach for the area, and Mima agreed. Geoff asked if the TAC has information on all PPC surveys conducted in the planning area available to them. Mima said that Marc has permission to look at the USFWS database to find out all the surveys that have been done. Leslie explained that when Marc conducts transects for the PPC, he will also look for needle-spined pineapple cactus (NSPC). As far as habitat for the NSPC, the TAC stuck with the Pima County model because suitable habitat was only expected in the far northeastern portion of the planning area. Marc found one little group of the species, and estimated about five more acres of habitat for the cactus, in that area. Mima said that the expanded planning area should now include more NSPC habitat than PPC. As for the Nichol's turk head cactus (NTHC), Mima said that the Corona de Tucson sighting was likely incorrect. She said that she could look again, which would be her third time. Geoff asked if Mima felt comfortable removing the NTHC from the list, and she agreed. The TAC concluded to remove the species from the list. Leslie said that if anything changes, the TAC could reassess.

For desert tortoise, we need to find out if any surveys have been done. Leslie said that in terms of a need for surveys and habitat, Pima County does not have a habitat model for this species. Trevor said that there is a BLM statewide habitat suitability model that could be looked into. Leslie asked Trevor for information related to "hot spots" and movement corridors, and in getting assessments of where habitat occurs. Trevor recommended Cecil Schwalbe and his students, and Don Swann. He also suggested Taylor Edwards, who did genetics studies. Mima suggested Marty Tuegel be included in the group. Roy Averill-Murray should also be included as he is the leader of the Mohave tortoise group. Trevor is going to coordinate the efforts for this species. The TAC will wait for a recommendation from the contacts.

For Huachuca water umbel, Pima County conducted surveys in the past. Mima has the report and will provide it to the group. Priscilla Titus conducted this survey along Cienega Creek. Trevor and Mima both disagree with the elevation limits listed on the handout for the species. The TAC agreed that Cienega Creek is the only potential habitat in the planning area. Mima is also going to look into any isolated springs within the planning area that could be included as potential habitat. Pima County has mapped these springs, and so, whatever they have mapped will be included with Cienega Creek as habitat. The TAC wants to look at the Pima County report, and have someone speak to Kathryn Mauz and Priscilla Titus about other potential areas, any possible stressors and threats, etc., before making any decisions.

For Gila topminnow, Leslie said that there was a Pima County survey done. Doug Duncan recently conducted fish surveys, but the report is not available yet. Topminnow habitat is considered to be the same as that of Huachuca water umbel. The TAC recommended talking to Doug Duncan about stressors and threats. Suitable habitat may increase if people put the species into their backyard ponds, which is something to keep in mind. For Gila chub, habitat is the same as for the topminnow, but chub need more water and deeper water. The TAC also recommended talking to Doug about this species. Pima County did a survey for chub, but SWCA was not yet able to get a copy of this report.

For lowland leopard frog (LLF), Leslie said that Pima County also surveyed for this, but she has not yet seen the report. Geoff said that, in the past, Phil Rosen has referred to three introduced safe harbor populations in ponds near the West Branch. The Park has frogs, too, and Don Swann has surveyed those extensively. Leslie asked for candidates for a subcommittee to establish a habitat model, and Don Swann, Phil Rosen, Jim Rorabaugh, and Marty Tuegel were all suggested. The City and SWCA will have a discussion with those individuals and then decide how to proceed from there. Trevor also mentioned that they should find out about chytrid fungus removal on the safe harbor frogs. For Mexican garter snake, the TAC is going to follow the same procedure as with LLF. Jeff Servoss will also be included in the discussion. Trevor is surprised that surveys have not been conducted at Cienega Creek Natural Preserve for this species, and he thinks that SWCA should confirm that surveys have not been done.

For lesser long-nosed bat, Leslie said that, with the proposed expanded planning area, the City is now moving into foraging areas. There was a recommendation to have someone conduct a plant survey of these areas. The TAC wants to get a contractor to do this and Tim Snow, Ronnie Sidner, Lynn Wood, and Scott Richardson were all suggested for a sub-committee on this species. Leslie said that there are no records of any surveys being done. Additionally, there are no caves available in the expanded area for the bat to roost in. Mima said that there are roosts on the Coronado NF, and that the species is known to forage roughly at a 40-mile radius around

roosts. Geoff also mentioned the Old Mammon Mine known maternity roost, west of Casa Grande. Leslie suggested asking Scott Richardson to confirm that the areas they are looking at for foraging habitat are correct. Then the TAC will find someone to do the work. For pale Townsend's big-eared bat, the TAC decided to discuss expanding the habitat model after the City has talked to Scott Richardson about habitat.

For Tucson shovel-nosed snake (TSS) and the ground snake, Leslie said that Phil Rosen had done surveys in Marana in 2003 and found one ground snake while conducting a TSS survey, and one TSS while conducting a ground snake survey near Picacho Peak. He looked at the habitat quality in Avra Valley and at the potential for natural regeneration. The TAC has decided to use both of his habitat models. The TAC also suggested adding Brian Wooldridge to the subcommittee list for these two species.

For yellow-billed cuckoo, Leslie said that Pima County has done surveys and she does have a copy of the report. Geoff mentioned that the survey was done in 2003 and three birds were observed along Tanque Verde Creek and two more were observed along the Santa Cruz. Geoff is going to check for any surveys conducted at Cienega Creek. Cathy did a spot check last year at Simpson's Farm. Leslie said that there was a pair there that may have been breeding. Mima said that Scott Richardson is doing quarterly surveys. The Santa Cruz floodway is being used to map suitable habitat, but Avra Valley has not been evaluated for habitat. Leslie asked if the TAC wants to start with that flood plain as cuckoo habitat, or if they want to use the same habitat model as CFPO. The TAC is going to leave it up to the sub-committee to decide habitat for this species.

For Merriam's mouse, Leslie said that Ken Kingsley conducted surveys for Pima County in the last couple of years. There are some questions regarding the genetic markers for this species that have not been resolved yet. Ken found quite a few of the species, and they do not appear to be uncommon. The TAC concluded to leave the species on the list and to find out more from Ken Kingsley, Phil Rosen, and Yar Petryszyn.

For yellow-nosed cotton rat, Geoff said that there was an HDMS record from the northern Santa Ritas. Leslie mentioned that there were contradicting reports as to the status of the population, and that trends were thus, unknown. Geoff, Linwood, and Trevor all agreed that the species is normally only found in the oak woodland belt, so this species could be removed from the list. They also concluded that the HDMS record was probably for further south into the Santa Ritas, where oak woodland does occur. The TAC concluded that Geoff should contact Tom Skinner, Wildlife Program Manager for the Coronado NF, to ask if he thinks it is okay to remove this species from the list.

For San Carlos wild-buckwheat, Leslie mentioned that this species is not on the Pima County list. Geoff said that the closest populations are likely from Mammoth and from the San Pedro River. However, he mentioned that there are HDMS records from the Cienega Creek watershed, just outside the planning area, so he did not want to eliminate the species from consideration without getting Mima's opinion first. Mima said that there is a new undescribed *Eriogonum* within the planning area, and suggested that maybe the HDMS records were incorrect and instead referred to this new species. She mentioned that the new species occurs on state land, and is extremely endemic, having a very narrow range. Mima said that the new species should be considered instead of the San Carlos species. She said that she would check

the planning area for sightings of the species. The TAC concluded to remove San Carlos wild-buckwheat from the list, and to look into the new species. For Lemmon cloak fern, Mima explained that even if it possibly occurred in the northeastern portion of the planning area as HDMS records indicate, the species does not need to be on the list as it occurs on very steep, rocky terrain. These lands are the type that the City would not develop anyways. The TAC concluded that this species could be removed from the list. Leslie concluded that they would wait to hear back from Geoff about Merriam's mouse, and from Mima regarding the new buckwheat species before making decisions on those two species.

In conclusion, the TAC is adding lesser long-nosed bat, desert tortoise, Huachuca water umbel, Gila topminnow, Gila chub, lowland leopard frog, and Mexican garter snake to the list, while removing Nichol's turk head cactus, yellow-nosed cotton rat, San Carlos wild-buckwheat, and Lemmon cloak fern. Geoff then brought up the Acuna cactus HDMS sighting, and mentioned that it should probably still be investigated. Mima said that it does need to be checked out before taking the species off the list. Leslie concluded that they would have Marc Baker go out and take a look at it. Leslie wants to have the list completely updated, so that when the TAC talks about the expanded Southlands area, they have a good account of what may occur there.

5) Avra Valley: Next Steps

Leslie explained that the TAC left off the discussion of Avra Valley conservation strategies with identified areas of existing habitat, recommendations to avoid existing habitat when possible, and identified potential corridors. The TAC has not yet decided what the corridors look like, nor created a plan for monitoring and management. Leslie said that the corridors are roughly delineated, however, the size, species composition, restoration, and other guidelines have not been defined. Leslie asked the TAC if they wanted to discuss the corridors generally, or on a species-specific basis. She suggested pulling out the maps again and looking at the Avra Valley Planning Area. Mima asked if they could revisit everything from the planning for Avra Valley to get reacquainted with the issues. Ralph discussed the water issues associated with Avra Valley, and mentioned that decisions may be made in the next year or so that could change management concerns. Leslie said that the whole purpose of the discussion is for the TAC to mitigate potential impacts to the target species in Avra Valley. There are still a lot of questions that need to be answered. She said that the City could bring more information to the TAC regarding potential projects, and then the TAC could compare these future project areas with known corridors, and then discuss minimum corridor boundaries.

6) Update: Santa Cruz River/El Rio Medio

Ann gave a presentation about the Santa Cruz River/El Rio Medio restoration area. She passed out a map showing the plan for the area. She also passed out a table called, "Grass roots, local restoration alternative for the El Rio Medio reach of the Santa Cruz River". Ann explained that it is easier for the Army Corps of Engineers (ACE) to crunch numbers if they have acreages associated with strategies. The areas on the map are based on habitat, and they are numbered from south to north. The table also lists a number of in-channel terraces, which Ann described as being sand bars with vegetation. It also addresses the bottom of the river channel from Congress to Prince, in terms of invasive species removal. It is recommended that a

predetermined ratio of hydroriparian vs. mesoriparian vs. xeroriparian habitat be achieved, based on the availability of hydroriparian habitat and normal river mechanisms to support that habitat. There are a few sections of the River that may support hydroriparian habitat, such as bridge drainages, storm drains, and tributary washes. Ann explained how the subcommittee wanted to address additional wildlife enhancements, and that the group may add more to this design at a later date. Ralph noted that there is a potential for recharge south of Speedway down to St. Mary's Rd. He explained that there are some wildcat landfills that would need to be investigated in that area, but that there is potential for in-channel recharge all the way to St. Mary's. Rich said that they only discuss north of St. Mary's as opposed to south because of the existing contamination that occurs south of St. Mary's. Ann proceeded to explain that another factor is that the Congress to St. Mary's reach is undersized, which presents an argument against tree planting in the river bottom there due to conveyance issues. She wants ACE to secure the bank higher up on both sides. ACE could create a second terrace of soil cement further back, then do planting in between terraces. She said that the reclaimed water system already delivers there and the place for the recovery wells would be south of Grant. She also mentioned that more information about recovery wells should be conveyed to ACE. She then said with the addition of recharge, the acreage of riparian habitat would change as a result. Rich said that the Roger Road Wastewater Treatment Plant may be shut down, and if that happens, the county would re-route wastewater treatment to Ina Rd, which could change. Ann said that for amphibian habitat, reclaimed water could be piped in by putting in a "sacrificial" recharge line that would help top off those ponds during the monsoon season. If a flood occurs, the line could be sacrificed, and rebuilt.

In the off-channel over-bank areas, there is generally reclaimed water available. Ann wants to push towards xeroriparian, with a small amount of mesoriparian. Ann has developed a plan for gradually removing the non-native species. She is concerned that salt cedars, though a part of cultural history, problematic. The leaf drop appears to suppress the growth of native species under tamarisk tree canopies. Ann wants to gradually get rid of the salt cedars, instead planting large native shade trees. At that point, ground level vegetation areas could be created. Ann then talked about the big bend, which is the old meander of the river. She explained that the reclaimed water line crosses to the east side of the river, which may not be feasible. The over-bank area outside the meander is currently dry, and an upland habitat area could be created there. Ann stated that the upper canopy and grasses could be used to help create habitat for other species. She said that earth sculpting and seeding could be used there. She then explained that if off-channel recharge were located they could collect stormwater or put in spillways to route with surplus river flow into the cavity at big bend. Rich asked if the time frame to complete the El Rio Medio project was 2014, and everyone agreed. The TAC discussed that the landfills may pose too big of a contamination issue, and that stormwater flow is going to be just as problematic as recharging reclaimed water in terms of the possible migration of contaminants. Ann mentioned that the area is a place where everyone seems to want something special to happen. Jennifer said that they could line the hole with clay to protect from contaminants and create a pool to support more mesoriparian and hydroriparian species. Rich said that this could be a location to artificially create a perch zone and addressed Lori's idea about public art along the soil cement banks. Ann also suggested using big giant native trees at Prince. Rich said that area 16 on the map would be a good spot for that.

Ann explained that the species matrix on the final page of the handout addresses a lot of the animal relationships, and also provides a historic reference as to why each species belongs on

the Santa Cruz. Ann asked everyone to read the goals and objectives on the handout. Ann said that Tucson Audubon Society is putting in a grant proposal to do restoration for 22nd to St. Mary's in the channel bottom, and to work with landowners on the bank, to provide. Ann said that this plan is low cost, will have low water usage, and will be low tech. Ann will e-mail the table to the TAC to look at and comment on.

7) Call to the Public

No members of the public spoke up.

8) Next Steps/ Future Meetings

The next TAC meeting is scheduled for August 1, from 9 to 11 am. Leslie concluded the meeting, saying that at the next meeting, the TAC will discuss El Rio Medio and Avra Valley. Leslie said that there would also be final recommendations for the expanded planning area and additional target species, but the general discussion will mostly turn back to focusing on the Avra Valley planning sub-area.